



In Reply Refer To:
02ETTX00-2018-
CPA-0074
02ETTX00-2018-TA-
1953

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Texas Coastal Ecological Services Field Office

P.O. Box 81468,
Corpus Christi, Texas 78468-1468
361/994-9005/ (Fax) 361/994-8262



October 1, 2018

Mr. Curtis E. Borland
Attorney/Advisor,
Vessel and Facility Operating Standards
Division
U.S. Coast Guard
2703 Martin Luther King Jr. Ave., SE
Washington, DC 20593-7509

Ms. Yvette M. Fields
Director
Office of Deepwater Ports and Offshore
Activities
U.S. Department of Transportation
Maritime Administration
1200 New Jersey Ave., SE, W21-309
Washington, D.C. 20590

Attn.: Mr. Roddy Bachman

Dear Mr. Borland and Ms. Fields:

The U.S. Fish and Wildlife Service (Service) has received the application to the U.S. Coast Guard (USCG) and U.S. Maritime Administration (MARAD) by Texas Gulf Terminals, Inc. (TGTI), dated June 29, 2018, requesting approval to own, construct, and operate a deepwater port for the export of domestically produced crude oil onto Very Large Crude Carriers (VLCC). The loading site for the project, a single point mooring (SPM) buoy system, is located approximately 14.71 miles off of the shoreline of North Padre Island adjacent to Kleberg County, supplied from a 150-acre onshore storage terminal facility (OSTF) in Nueces County, Texas. Approximately 26.1 miles of two, new 30-inch diameter pipelines would supply the SPM. The pipelines will extend across the Gulf of Mexico, North Padre Island, the Laguna Madre, and mainland west of the Laguna Madre. Other components described in the application are an 8.25-acre booster station west of the Laguna Madre, and valve station on North Padre Island. The application does not include information regarding the supply pipeline(s) for the OSTF.

COMMENTS TO DATE

The Service received a copy of the application under joint review by the USCG and MARAD for TGTI on July 13, 2018. By email transmission, dated July 27, 2018, the Service provided comments and recommendations at the request of the USCG who was seeking input on major deficiencies or areas of concern regarding the application and supporting information that was provided for review.

The USCG by letter, dated August 6, 2018, notified the Service that MARAD published the TGTI Notice of Application in the Federal Register (FR) on August 6, 2018. In an email to the Service, dated August 6, 2018, the USCG noted that the application package provided to the Service in July was submitted to the FR without change.

In response to the USCG's June 29, 2018, request, the Service reviewed the following sections and appendices: Volume I, Appendix A [Project figures], Vol. I Appendix K [USACE Permit Application]; Volume II, Introduction, Evaluation Framework and Summary of Impact Revised, Vol. II Appendix C [Wetland Delineation – Inshore], App. D [Wetland Delineation – Onshore], App. E [Benthic Survey Report], App. F [Submerged Aquatic Vegetation Impact Analysis], App. H [Threatened and Endangered Species Report], App. I [Threatened and Endangered Species Report – Onshore], App. J [Piping Plover and Red Knot Survey Report]. For the purposes of the initial response, the Service's primary concerns were, and continue to be, impacts of the proposed project on threatened and endangered species and critical habitat, and impacts to federal trust fish and wildlife resources including special aquatic sites.

With regard to threatened and endangered species, the Service recommends that a biological assessment (BA) be prepared covering the entire project area from the OSTF in Nueces County to the Single Point Mooring Buoy System in the Gulf of Mexico. As currently available in the project documents, this information is spread across several reports. Impacts of the project on listed species and critical habitat should be analyzed for the entire project, not project segment by project segment. As presented in the various reports, a determination of either “no effect”, or “may affect, not likely to adversely affect” (MANLAA) has been applied to each of the species analyzed. Although the USCG has not requested concurrence on the determinations that were made for the species in the project area, at this time, the Service would not concur with all of these determinations. The Service has specific concerns with the data that was gathered for the piping plover, red knot, and sea turtles, as it presents an incomplete picture for the anticipated construction and operations impacts of the project. The Service has additional questions regarding several other species that could be or are known to occur in the project area and recommends that the applicant coordinate with our office prior to or during the development of a BA for the project. The conclusions of a final BA should provide the USCG with the information to decide whether formal consultation is appropriate.

With regard to the impacts of the project during construction and operation on coastal habitats, including special aquatic sites, the Service disagrees with the reports' conclusion that all impacts are temporary. Of great concern are the impacts to sea grass beds and unvegetated tidal flats, identified as temporary with justifications that would support such a determination. Both of these habitats have been designated as special aquatic sites. The proposed impact to 9.79 acres of sea grass beds from trenching would, at a minimum, result in an extended temporal loss even if successful restoration work could be applied to the impact areas. Unvegetated tidal flats might not restore simply by the replacement of excavated material into pipeline trenches depending on their location within the tidal system. Impacts to habitats can also occur from access by equipment and staging and stockpiling of materials for the project. These secondary impact sites

and actions should be included in the project description and analysis, including the U.S. Army Corps of Engineers (USACE) permit application. The Service recommends that a mitigation plan be drafted and circulated to the resource agencies and the USACE for review and comment. The mitigation plan should include specific analysis of the impacts of the project identifying how the selected route avoids and minimizes impacts to important coastal habitats, how unavoidable impacts will be mitigated by restoration or replacement, and where restoration is to be applied a monitoring plan for that work.

GENERAL COMMENTS

The Service's comments and recommendations, initially submitted directly to the USCG on July 27, 2018, remain unchanged and are noted above. Subsequent to these initial comments, the Service reviewed additional materials submitted by the applicant to the USCG and MARAD as part of their application. The application fails to acknowledge some significant potential impacts to fish and wildlife resources, including federally listed threatened and endangered species and critical habitat. There are some errors and omissions in the application that, even with a desktop analysis, should have been included in the project description and the anticipated impacts. For example, there is a preponderance of evidence in the USACE permit record, which could have easily been accessed by the applicant's consultants, that trenching through seagrass beds is not, with the techniques proposed, a temporary impact. Rather it is at best a long term impact. The volume of materials and the limits of the Service's time and staff availability, have precluded a review of every submitted document. There is an extraordinary amount of repetition in the text of the application documents. The Service will not make corrections to each instance of a reference by the applicant to a temporary impact when the Service finds that such a designation incorrect, but hope we a fair understanding of the applicant's approach and position on their proposed project, and have provided sufficient comments and recommendations for our concerns with the project as proposed in the application. Additionally, thanks to the Service's colleagues at Padre Island National Seashore (PINS), we can provide pertinent, project-specific comments and recommendations on the proposed TGTI Project.

SPECIFIC COMMENTS

Volume I: Deepwater Port License Application (Public)

Section 1.3 Project Components: As noted in this section, the application does not include the pipelines that will supply the OSTF. Without this information, the full impact of the project on fish and wildlife resources, including federally listed threatened and endangered species and critical habitat cannot be evaluated. The Service recommends that the applicant be required to submit complete information regarding the supply pipelines for the OSTF so that the USCG and MARAD can, with the comments and recommendations from the Service and other agencies, including the public, be able to make their decision on the full scope of the TGTI Project.

22.1 Description of Onshore Project Components: Beginning in this section and referenced again a number of times throughout the document, note is made that the OSTF will be powered by 4-6,000 horse power motors; the booster station will have 4-5,000 horse power motors; and the onshore valve station would motor operated valves, digital communication equipment and ventilation fans. The noise impacts of these components on surrounding wildlife, and, in the case of the onshore valve station, the effects on wildlife, including nesting sea turtles, and visitors to the adjacent beach, should be documented. Please include a discussion of the amount of noise that would be generated by these features, when and how long the noise would be generated, an analysis of its impacts on the adjacent habitats, and a plan to ameliorate noise.

Section 23.3 Vessel Bunkering Methods: The applicant notes that it does not intend to provide stores, provisions, bunkering or bunkering vessels; that this would be provided by others through the vessel operators. It is the understanding of the Service that, although the number may vary, each vessel would be staffed with approximately 24 personnel. Given that the desired use of the SPM would be up to 8 VLCC moorings per month, cumulatively, the vessel activity associated with servicing the VLCCs could be significant. The Service recommends that the applicant expand the description of this secondary activity, including the safety issues that would need to be addressed as a result of those services.

Section 24.2.4 Stage 4 – Installations, Engineering Drawings, and Appendix C. Construction Schedule:

The applicant proposes the phases and specific times for construction of the various project features: the four horizontal directional drill segments (HDD), the trenched pipeline segments, the OSTF, booster station, onshore valve station, and SPM facility. The work associated with these phases raises concerns regarding the impacts, direct and indirect, of the proposed work on fish and wildlife resources, including federally listed threatened and endangered species, and critical habitat. Additional questions arise from the absence of details regarding the proposed activities, particularly locations for stockpiling materials, access routes to be used by equipment and personnel, frequency and timing of access i.e. work schedules, power and data supply to accomplish the work and the constructed facilities, lighting, and noise impacts as noted above for the inshore and onshore features.

Phase 1 – HDD 4 Setup and Installation is scheduled for 7/9/19 to 8/22/19. This phase includes setup the installation of the pipelines from the behind the dunes of North Padre Island into the Gulf of Mexico. Sea turtle nesting season extends from March through September. Although the intent by the applicant is to avoid direct impact to the shoreline by using HDD, the Service is concerned that on shore and near shore activities related to this phase, including lighting and vibration associated with this work could have an adverse impact on nesting sea turtles and those present in the nearshore waters.

Phase 2 – HDD 2 Setup and Laguna Madre Section 1 and 2 Setup and Installation is scheduled for 8/22/19 to 9/30/19. This phase includes installation, by trenching, eastern-most Laguna

Madre pipeline segment, and preliminary work for the HDD segment that would go under the Gulf Intracoastal Waterway (GIWW). Project plans do not clearly articulate whether or not all of the work proposed for this phase would be conducted in permanently submerged habitat. This information is important to assessing the impact of this work, and including in the applicant's biological assessment, on the federally listed piping plover (*Charadrius melodus*), and its critical habitat, and on the red knot (*Calidris canutus ssp. Rufa*) whose wintering season extends from August through March.

Phase 3 – HDD 2 Installation of the pipelines under the GIWW is scheduled for 10/1/19 to 10/31/19. In addition to impacts to piping plover and red knot, as noted above, the Service notes that juvenile sea turtles, particularly green sea turtles are abundant in the Laguna Madre. The Service recommends contacting the experts at the Padre Island National Seashore Division of Sea Turtle Science and Recovery for guidance on evaluation of the impacts of this portion of the project and inclusion into a biological assessment for consultation with the National Marine Fisheries Service.

Phase 4 – HDD 3 Setup and North Padre Island Inshore Section Setup and Installation is scheduled for 10/31/19 to 1/23/20. The applicant proposes to conduct the setup work for the HDD segment that would extend from the eastern waters of the Laguna Madre and under tidal flats along the western shore of North Padre Island. Project plans do not clearly articulate whether or not the work proposed for this phase of HDD 3 would be conducted in permanently submerged habitat on its western side nor clearly what habitat is present on the eastern side of HDD 3. As this phase would occur during the wintering season for the piping plover and red knot, and critical habitat for the piping plover is present along this shoreline, clear description of the habitat present in the construction area is needed for evaluation of impacts of this phase of work on critical habitat and these two listed species.

Phase 5 – Offshore Pipeline Setup and Installation is scheduled for 1/23/20 to 4/30/20. As noted above, sea turtle nesting season is March through September. Prior to nesting, sea turtles congregate offshore for mating. The Service recommends contacting the experts at the Padre Island National Seashore Division of Sea Turtle Science and Recovery for guidance on evaluation of the impacts of this portion of the project and inclusion into a biological assessment for consultation with the National Marine Fisheries Service.

Phase 6 – HDD 3 Installation is scheduled for 4/30/20 to 6/1/20. This HDD segment extends under the western shoreline of North Padre Island. At this time of year, birds protected under the Migratory Bird Treaty Act are beginning to set up and occupy nests. Bird nesting season is generally from February to August. In our area, some bird species are ground nesters and could be impacted by the activities associated with the completion of this part of the project. The Service will provide recommendations for avoiding and minimizing impacts to nesting birds.

Phase 7 – HDD 1 Setup and Onshore Pipeline Setup and Installation is scheduled for 6/2/20 to 8/10/20. At this time of year, birds protected under the Migratory Bird Treaty Act are nesting and

rearing young. The Service will provide recommendations for avoiding and minimizing impacts to nesting birds.

Phase 8 – HDD 1 Installation is scheduled for 8/11/20 to 9/10/20. Although the end of bird nesting season is generally considered to be over by the end of August, some late nesters may still have fledglings nearby and disturbance should be avoided if possible.

Phase 9 – Installation of SPM Buoy System and Associated Components is scheduled for 9/10/20 to 10/15/20. The Service recommends consultation with the National Marine Fisheries Service for impacts to fisheries resources and sea turtle hatchlings that may be present.

Volume I, Appendix K U.S. Army Corps of Engineers Permit Application

In addition to the Service's concerns already noted by the applicant's describing what might be, at best, long term if not a permanent impact to seagrass beds as a result of trenching, the permit application contains insufficient details regarding the proposed work in wetlands and waters of the U.S.. For example, the applicant describes pipeline installation in seagrass areas in the Construction Activities section:

Once the Laguna Madre Section 1 and Laguna Madre Section 2 have been installed within the excavated trench, material temporarily placed on barges will be placed back within the trench followed by the restoration of the construction workspace to preexisting contours and elevations.

This description in no way explains how such an action supports a call of temporary impacts to seagrasses, and raises additional concerns regarding the proposed location of the referenced barges, how they would be moved to the site, what the habitat is at their location, how long they would be in place, or need to be moved to follow the trenching work. The Service is concerned that the applicant has a poor understanding that removal of and attempts to replace material into excavated trenches is vastly different within the Laguna Madre from onshore work.

The applicant has made a call of temporary impact, and minor or insignificant, for every jurisdictional resource encountered by the project during construction. However, the application lacks a detailed plan, including best management practices which would reduce the amount of impact, what time frame they are proposing which would qualify the impact as temporary as opposed to long term, monitoring plans to document the effects following construction, the restoration actions to be implemented, and what biological goals will be used to define restored areas.

Appendix K does not include sufficient information for actions proposed during construction. For example, utilities which would need to be available to power the OSTF, Booster Station, and Onshore valve station, are not included in the materials provided. For the OSTF, utilities appear

to include not only electric service, but since an office is proposed to be co-located at the tank farm, water and waste-water. Construction of power lines and waterlines could result in additional impacts to jurisdictional resources that should be included in the USACE permit application. Additionally, the descriptions of the work proposed in the Laguna Madre and on North Padre Island are insufficiently detailed with regard to access roads, staging areas for equipment, supplies, power, data service, and personnel. Significant impacts can result from these aspects of construction work and warrant detailed descriptions of the locations and habitat types present.

Volume II: Environmental Evaluation (Public)

Table 4: Regional Projects Identified for Consideration in the Cumulative Impacts Analysis, Item #14: This item fails to include additional work proposed by the Port of Corpus Christi Authority (POCCA), that is, to study the deepening of the Corpus Christi Ship Channel to between -75 and -85 feet from the Gulf of Mexico through Harbor Island to the La Quinta Junction. Whether as an amendment of item #14 or as an additional item, this action needs to be included in the cumulative impacts analysis of the TGTI Project. Additionally, the Service recommends that the POCCA project be incorporated into the TGTI alternatives analysis that is referenced in Section 5.2 Alternatives Analysis of this document.

Section 7: Wildlife and Protected Species. As noted in our comments above regarding Phase 1 work, the analysis of impacts of the project on wildlife, including federally listed threatened and endangered species, fails to account for the significant, if secondary, impacts of construction activities related to lighting, vibration from equipment, trenching, and HDD work, movement and staging of equipment, supplies, and personnel. Every aspect of the proposed construction work should be described in detail, the range, physical and temporal, of the effects, and analyze those impacts on sensitive species. Furthermore, the applicant's more than frequent use of the term "temporal" is applied with no descriptions, i.e. is temporal measured in hours, days, weeks, years? All of the effects, physical and temporal, will need to be included in the applicant's biological assessment.

Section 7.2.4.8 West Indian Manatee, *Trichechus manatus*. As the presence of this species is unpredictable, the Service recommends the following best management practices be implemented for all coastal construction projects, including the TGTI Project which falls into the middle and lower coast region:

In Texas, strandings and sightings of the West Indian manatee (*Trichechus manatus*) have been documented from Galveston County to Cameron County. For coastal construction projects, the Service recommends that project construction and operations employees will (a) be advised that manatees may approach the proposed project area (b) be provided materials, such as a poster, to assist in identifying the mammal, (c) be instructed not to feed or water the animal, and (d) contact the Service and the Texas Marine Mammal Stranding Network (TMMSN) if a manatee

is sighted. For the middle and lower coast, contact the Service at 361-533-6765, for the upper Texas coast, contact the Service at 713-542-1861. The TMMSN hotline number is 800-962-6625.

Section 7.2.5.2 Rufa Red Knot, *Calidris canutus rufa*, and Section 7.2.5.4 Piping Plover, *Charadrius melodus*. With regard to the impacts of the proposed project construction and operation on federally listed piping plover and red knot, the full range of effects of the projects actions as noted above, will need to be included in the applicant's biological assessment. Furthermore, though note is made that the habitat along the eastern shoreline would be avoided by installing the pipeline via HDD, the plan drawings provided do not clearly show that the entry and exit boxes would be located sufficiently far from habitat used by these species so as not to impact either directly or indirectly. A single three-month survey is insufficient to document use by these species throughout the wintering season and over the long-term. Furthermore, impacts to critical habitat for the piping plover need to be evaluated and a separate determination made.

Section 7.2.5.3 Interior Least Tern, *Sterna antillarum athalassos*. The Service is concerned that the preparers of this document did not seem to know that the interior least tern is federally listed, endangered, only where breeding occurs further than 50 miles from the coast. Although least terns do breed in the project area; however, these are protected as migratory birds, not under the endangered species act.

Section 7.2.5.5 Northern Aplomado Falcon, *Falco femoralis septentrionalis*. The information in this section is not up-to-date. There are 3 falcon nesting structures on Mustang Island. Successful nesting was documented in 2018 at one of the structures. Two are structures in Nueces County on the Kleberg tract which is the site of the proposed project, where Peregrine Fund staff observed young aplomados nearby, potentially for future nesting use. Two structures are present in Padre Island National Seashore. The Service recommends that the Peregrine Fund be contacted to get correct information regarding this species and activity in the project area and other nearby areas.

7.2.5.7 Migratory Birds Species of Conservation Concern. The Service recommends that the following conservation actions and best management practices for all migratory birds be incorporated into the TGTI Project plans for the entire project area:

The Migratory Bird Treaty Act implements various treaties and conventions that prohibit illegal killing, possessing, or transporting of migratory birds. Many birds may nest in trees, brush areas or other suitable habitat. In coastal areas, birds nest on unvegetated flats and in vegetated marsh. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August so individuals, nests, or eggs are not destroyed. If project activities must be conducted during this time, we recommend surveying for nests prior to commencing work. If a nest is found, and if possible, the Service recommends leaving a buffer of vegetation ($\geq 50\text{m}$ for songbirds, $> 100\text{m}$ for wading birds, and $>$

180m for terns, skimmers and birds of prey) around the nest until young have fledged or the nest is abandoned. A list of migratory birds may be viewed at <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/MBTANDX.HTML> or <http://federalregister.gov/a/2010-3294>

COMMENTS SUBMITTED BY PADRE ISLAND NATIONAL SEASHORE:

[Note: Due to their specific expertise with regard to sea turtle biology, the Service deems it appropriate to submit, unedited, the comments and recommendations provided to this office on the TGTI permit application as follows]

The following comments are in response to an application being reviewed jointly by the U. S. Coast Guard (USCG) and Maritime Administration (MARAD) for a deepwater port project proposed by Texas Gulf Terminals, Inc. (TGTI). These documents were received by Padre Island National Seashore, NPS, DOI, on approximately July 18, 2018.

Documents reviewed include the following sections and appendices: Volume I, Appendix A [Project figures], Vol. I Appendix K [USACE Permit Application]; Volume II, Introduction, Evaluation Framework and Summary of Impact Revised, Vol. II Appendix C [Wetland Delineation – Inshore], App. D [Wetland Delineation – Onshore], App. E [Benthic Survey Report], App. F [Submerged Aquatic Vegetation Impact Analysis], App. H [Threatened and Endangered Species Report], App. I [Threatened and Endangered Species Report – Onshore], App. J [Piping Plover and Red Knot Survey Report].

1). Green sea turtles, are not described correctly and threats to this species are not well described. As written in Appendix H – Threatened and Endangered Species Report, Table 1, Page 5, Reptiles, Green Sea Turtle: “*Global distributions in either the tropics, subtropics or temperate waters (NOAA 2018). Dependent upon life history stage the green sea turtle has been documented using a variety of habitats. Adults spend most of their time within shallow coastal waterways with large sea grass beds (Reich et al. 2007). Juvenile turtles will spend most of their time within deep pelagic waters (Reich et al. 2007).*”

This synopsis ignores one of the three main life stages, juveniles, the most important to consider during this project, and describes adult activity incorrectly. The publication they cite, Reich et al. 2007, was a study on pelagic hatchlings and yearlings, not adults or juveniles. As these turtles reach approximately 20–25cm SCL (straight carapace length), they transition to shallow inshore and nearshore neritic zone habitats where algae and seagrass beds provide forage and shallow water provides safety from larger predators such as sharks (Howell et al. 2016). These juveniles inhabit inshore waters year-round and comprise the largest population of green sea turtles in Texas, with the largest number of individuals residing in the Laguna Madre (Shaver et al. 2017). This puts them at risk of impact during construction for this project, especially in the trench and pipe laying areas shown in Appendix A, Construction details, Exhibit 10 and 11. During cold weather, when the water temperature in the Laguna Madre drops below 50F sea turtles become

incapacitated, cold stunned, and cannot escape in-water construction activities that put them at risk. Mitigation to protect cold stunned sea turtles during cold weather should be described in the context of construction in the Laguna Madre for this project. This is mentioned briefly on page 14 of Appendix H, though with no explanation.

Adults rarely utilize these shallow coastal waterway habitats as suggested in the synopsis. Adult green sea turtles migrate and inhabit mainly the Gulf of Mexico waters (Bass et al 2006), using nearshore habitats seasonally for nesting and mating (Hart et al. 2017). Adult green sea turtles have been documented nesting on North Padre Island beaches in increasing numbers, with a record 29 nests documented in Texas during 2017, 23 of those on North Padre Island. These adults in nearshore waters would be impacted by nearshore construction and impacts of vibration if such were to occur during pipe drilling under beach habitat. Impacts from the long-term operations in the nearshore water of the port after completion should also be mentioned. For example, increased boat traffic in the nearshore environment and associated threats should be described.

Appendix H – Threatened and Endangered Species Report, section “3.1.9 Sea Turtles” does cover the juvenile life stage for green sea turtles and habitat use of these species with more detail and accuracy, it however, fails to completely identify many of the threats, mentioned above.

References:

Bass AL, Epperly SP, Braun-McNeill J (2006) Green turtle (*Chelonia mydas*) foraging and nesting aggregations in the Caribbean and Atlantic: impact of currents and behavior on dispersal. *J. Hered.* 97, 346–354.

Hart KM, Iverson AR, Benscoter AM, Fujisaki I et al. (2017) Resident areas and migrations of female green turtles nesting at Buck Island Reef National Monument, St. Croix, US Virgin Islands. *Endang Species Res* 32:89-101

Howell LN, Reich KJ, Shaver DJ, Landry AM Jr, Gorga CC. (2016) Ontogenetic shifts in diet and habitat of juvenile green sea turtles in the northwestern Gulf of Mexico. *Mar Ecol Prog Ser.* 559: 217–229

Shaver DJ, Tissot PE, Streich MM, Walker JS, Rubio C, Amos AF, et al. (2017) Hypothermic stunning of green sea turtles in a western Gulf of Mexico foraging habitat. *PLoS ONE* 12(3): e0173920

2). Threats to Kemp’s ridley sea turtles are not clearly or accurately described.

The Kemp’s ridley sea turtle is the most endangered of all the sea turtle species, and in the U.S., nests primarily on the Texas coast. The main nesting beach for this species is in Mexico, 160 km south of the U.S. border. The final port area for the proposed project is in approximately 93’–103’ (28–31 meters) water depth at mean low tide and approximately 14–15 miles (22.5–24 km) from shore near the northern boundary of Padre Island National Seashore. During port project

construction and operation, threats include disruption to migration and foraging due to increased activity, such as specifically associated with dredging, pipe laying, and boat traffic in the nearshore area.

In Appendix A, Exhibit 13, Installation of HDD Box 4D, the trenching, and pipe laying areas traverse nearshore waters. This area is located in the Kemp's ridley sea turtle main migratory pathway and foraging areas, established by satellite tracking adult nesting turtles (Shaver et al. 2016, 2017). During operations of the port, threats to this species include disturbance caused by increased boat traffic, impacts from increased pollution caused by increased boat traffic. Of 43 post-nesting Kemp's ridleys tracked by satellite tagging from Mexican nesting beaches, 84% of them migrated north using the nearshore waters off the Texas coast (<http://www.seaturtle.org/tracking>). The threats to this species is higher since the Kemp's ridley is limited to coastal migration unlike other sea turtle species that migrate in deeper water. This species is the smallest of the sea turtles and thus has a limited dive depth and cannot forage in deeper water. A portion of adult Kemp's ridleys have also been documented as year round residents in the area where the project is proposed (Shaver & Rubio 2008, Shaver et al. 2016a, b, 2017) extending the threats to the species beyond the nesting season (described in Appendix H, page 13 as March – November, for all sea turtle species).

References:

Shaver DJ & Rubio C (2008) Post-nesting movement of wild and head-started Kemp's ridley sea turtles, *Lepidochelys kempii*, in the Gulf of Mexico. *Endang Species Res* 4:43–55

Shaver DJ, Hart KM, Fujisaki I, Rubio C, et al. (2016a) Migratory corridors of adult female Kemp's ridley turtles in the Gulf of Mexico. *Biol Conserv* 194:158

Shaver DJ, Rubio C, Walker JS, George J, et al. (2016b) Kemp's ridley sea turtle (*Lepidochelys kempii*) nesting on the Texas coast: geographic, temporal, and demographic trends through 2014. *Gulf Mex Sci* 33: 158–178

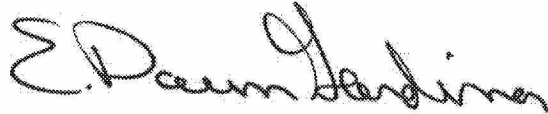
Shaver DJ, Hart KM, Fujisaki I, Bucklin D, Iverson AR, Rubio C, et al. (2017) Inter-nesting movements and habitat-use of adult female Kemp's ridley turtles in the Gulf of Mexico. *PLoS One* 12(3):e0174248


Mr. Borland and Ms. Fields

12

Thank you for the opportunity to review the proposed project. If you have questions or concerns regarding our comments and recommendations, please contact Pat Clements at pat_clements@fws.gov, or by phone at 361-225-7316.

Sincerely,



 Charles Ardizzone
Field Supervisor

cc:

J. Robinson, Ecosystem Resources Program, TPWD, Corpus Christi, TX
R. Swafford, Habitat Conservation Division, NMFS, Galveston, TX
P. Kaspar, Region 6 EPA, Houston, TX
A. Nunez, Coastal Field Operations, TGLO, Corpus Christi, TX
M. Pattillo, U.S Army Corps of Engineers, Corpus Christi, TX